

CATHAROSIA PYGMAEA (FALLÉN) (DIPTERA: TACHINIDAE) NEW TO BRITAIN

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Belshaw (1993) listed 241 species of tachinid flies as British, though the relative lack of popularity of this rather challenging fly family provides real opportunities for discovering further species where plenty of material is retained. Within vice-county Warwickshire, where I have made special efforts to accumulate records of tachinids since 1990, the county list currently stands at just over one hundred species, though this figure rises steadily each year. A good number of Nationally Scarce and a few Red Data Book species are to be found here, but the most interesting species to date came to light in the summer of 1996.

During this summer, an entomological survey was carried out along a disused railway line running through the heavily urbanized Lower Stoke area of Coventry. This was part of a wide-ranging environmental appraisal investigating the potential impacts of a proposed road scheme that is already partially completed along the former route of this same disused railway. On 17 July two specimens of an unusual looking, small tachinid were swept from an area of rank grassland, tall herb and invading birch and willow scrub on made-up ground that receives the normal disturbance of dog-walking, cycling, fly-tipping and arson that one comes to expect on informal urban green-space.

They represented a male and female, displaying strong sexual dimorphism, yet clearly conspecific on the basis of a number of features, including wing venation and wing clouding, both of which rather resemble the rhinophorid *Melanophora roralis* (L.). The well-formed subscutellum and meral (hypopleural) setae clearly indicated a tachinid, but attempts to key the specimens out using Belshaw (*loc. cit.*) and van Emden (1954) proved fruitless. A visit was subsequently made to The Natural History Museum, London, where, using the world tachinid collection under the guidance of Nigel Wyatt, it was concluded that the specimens represent *Catharosia pygmaea* (Fallén), a species and genus hitherto unknown in Great Britain. A further male specimen was obtained in the same general area as the first two specimens on 31 July after prolonged sweeping of grassland and other low herbage.

C. pygmaea is a member of the subfamily Phasiinae and tribe Catharosiini. Its closest relative in Britain is the rare *Litophasia hyalipennis* (Fallén), which somewhat resembles *C. pygmaea* in size and build but has unclouded wings, a less sharply angled upper cross vein and a poorly differentiated subscutellum. *C. pygmaea* has been recorded from scattered localities across Europe as far north as Sweden, also from several parts of the former USSR, Israel and Mongolia (Herting & Dely-Draskovitz, 1993).

Herting & Dely-Draskovitz listed four species of *Catharosia* in the Palaearctic region and Kugler (1977) provided a key to these. *C. albisquama* (Villeneuve, 1932) is a tiny species, scarcely 2 mm long with uniformly smoky wings, and has been recorded in Europe from Germany, Spain and Hungary. *C. flavicornis* (Zett.) more closely resembles *C. pygmaea* in size (about 3.5–4.0 mm long) but has yellow and brown rather than black antennae, highly reduced palpi and a male frons that is as wide as an eye (very narrow in *C. pygmaea*). It has been recorded in Europe from France, Hungary, Poland and Sweden. Both of these species could conceivably turn

up in Britain. The fourth species, *C. claripennis* Kugler, 1977, is only recorded from Israel. The genus is also represented in the Afrotropical, Nearctic, Neotropical and possibly Oriental Regions.

The north American *C. lustrans* (Reinhard, 1944) which, on the basis of the illustration in the Manual of Nearctic Diptera, appears to be very similar to *C. pygmaea*, has been reared from various lygaeid bugs (Arnaud, 1978). The Coventry specimens were swept from floristically diverse ruderal grassland, tall herb or scrub foliage supporting the following lygaeids: *Drymus sylvaticus* (Fab.), *Heterogaster urticae* (Fab.), *Kleidocerys resedae* (Panzer), *Peritrechus geniculatus* (Hahn), *Scolopostethus affinis* (Schilling), *S. grandis* Horvath and *Taphropeltus contractus* (H.-S.).

It is perhaps also worth noting that the second male was observed performing tephritid-style wing displays whilst still alive in the pooter. This is a most unusual habit for a tachinid, and suggests that the clouded wings with milky-white apical wing spots may be used for courtship. *Phania fumesta* (Meigen), *Subclytia rotundiventris* (Fallén) and *Dionaea aurifrons* (Meigen) also hold their wings wide apart when at rest and males of *D. aurifrons* appear to have a complex courtship involving erratic, swarming flight over rough grassland (Assis-Fonseca, 1949).

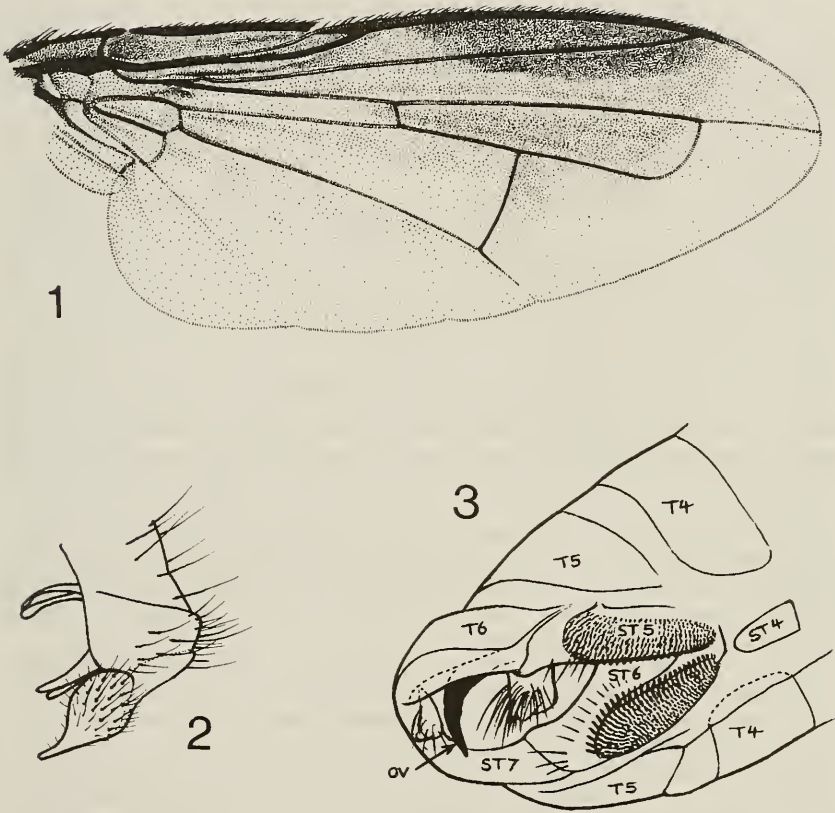
IDENTIFICATION AND DESCRIPTION

Both sexes run to couplet 95 in Belshaw's Handbook, at which point they do not fall comfortably into either couplet 96 (abdomen without distinct bristles) or couplet 97 (abdomen with numerous easily distinguishable bristles). However, both sexes can be separated from all other species between couplets 95 and 105 by the presence of milky-white apical wing spots, contrasting with an otherwise entirely dark wing membrane (female) or a dark smudge in the subcostal area of the wing (male).

Male.—Small (body length 3.0–4.0 mm), shining black species without any conspicuous dusting (except on sides of face) and with rather weak bristles. Rather resembles the common rhinophorid *Rhinophora lepida* (Meigen, 1824) in build.

Head: Frons about width of fore tibia, frontal orbits largely shining black with little dusting, separated from each other by the matt black interfrontalia which occupies about one-third the width of the frons throughout its length. Approximately 10 pairs of rather weak, crossed frontal bristles extending down to the level of the insertion point of the antennae. Lower part of frontal orbits and parafacialia heavily dusted whitish when viewed from above. Parafacialia about width of third antennal segment at top narrowing to only half of this width at the bottom. In side view, antennae inserted low for a tachinid at about the mid-point of the eye. Jowls very narrow, scarcely half the width of the third antennal segment when viewed strictly laterally, thus the eyes occupy much of the head capsule. Vibrissae well differentiated and 3–4 setae on lower part of facial ridge above. Jowls and occiput lightly grey-dusted with entirely black hairs. A pair of short ocellar setae and stronger vertical setae present. Antennae black, third segment about twice as long as second. Arista bare. Eyes bare.

Thorax: Mesonotum and pleurae shining black and scarcely dusted. Dorsocentrals differentiated (one presutural and three postsutural pairs) but rather weak. Acrostichals not differentiated and hairs of disc sparse and not arranged in rows. All thoracic vestiture black. Other differentiated bristle pairs include humerals (2–4), presuturals (1), notopleurals (2), prealars (1), interalar (1–2), postalars (2), basal scutellars (1) and crossed apical scutellars (1). Length of the latter two pairs approximately that of the scutellum length. Meral setae and postscutellum clearly



Figs 1–3. *Catharosia pygmaea*. 1. Forewing of male. 2. Male genitalia, lateral view. 3. Female genitalia, oblique lateral view, ov = ovipositor.

differentiated. Halteres dark. Lower calypter smoky black, diverging away from the scutellum, contrasting with the milky white upper calypter.

Legs: Entirely black with moderately lengthened femoral bristles, but tibiae with few rather weak bristles, none longer than width of the tibia.

Wings (Fig. 1): Distinct blackish smudge in subcostal area beyond subcosta in front of cell r_{4+5} . Wing tip beyond vein M milky white, forming a conspicuous spot when viewed against a dark background. Remainder of wing membrane with a less conspicuous grey tint that becomes darker in cell r_{4+5} and in the basal subcostal area. Vein M sharply curved towards tip, joining vein R_{4+5} well before wing tip, leaving a long stalk subequal to length of crossvein $m-cu$. 1–2 bristles on node of vein R_{4+5} . No subcostal spine. Costal breaks just distal to the humeral cross vein and immediately before junction of costal and subcostal veins.

Abdomen: Tergites shining black, scarcely dusted, with general covering of short, decumbent black hairs. Rather weak marginal bristles present, most conspicuous on tergites 4 and 5. Syntergite 1+2 somewhat longer than tergite 3, with basal excavation weakly formed at the extreme base. Genitalia: Fig. 2.

Female.—Displaying strong sexual dimorphism. Frons about one-quarter head width. All femora of British specimen predominantly reddish with darker patches above towards tip (middle and hind) or more extensively above (front), relatively stouter than those of the male; trochanters and coxae partially reddish. Some continental specimens have legs predominantly black. Wings entirely smoky brown-black except for the milky-white wing tips, a pattern only otherwise found in the rhinophorid *Melanophora roralis* (L.); venation as in male. Abdomen rather dorso-ventrally flattened across tergites 1 + 2 and 3, syntergite 1 + 2 slightly reddish at sides. Terminalia rather difficult to interpret in British specimen due to distortion. John Deeming (pers. comm.) has provided the following description of what is a distinctive set of structures, based on a French and a Maltese specimen in the National Museum of Wales, Cardiff (a specimen from France has been illustrated (Fig. 3)). Sternite 5 divided into a pair of winglike structures, the ventral surface of which is covered with compact short bristles, those on the inner margin somewhat longer and forming a comb. This sternite in both shape and chaetotaxy resembles the sternite 5 of a male sarcophagine and undoubtedly serves a similar function as an adhesion plate when applied to a surface: in this case the cuticle of a bug host (in the case of a male sarcophagine, a female during copulation). The wings of sternite 5 overlay the equally heavily sclerotized and V-shaped sternite 6, the postlateral extremities of which abut the ventral (true lateral) margin of tergite 6, leaving only a hair-line membrane separating them; sternite 7 paler but well-sclerotized with a medial prominence bearing a tuft of hairs. Ovipositor black, somewhat leaf-shaped, bladelike and pointed. Leg and abdominal bristles less differentiated than in male. British specimen much smaller than the two males, body length about 2.5 mm; continental specimens up to 4.0 mm.

C. pygmaea is one of a number of insects recently discovered in Warwickshire that are either associated with southern England or the Eurasian continent. The hoverfly, *Eristalis similis* (Fallén, 1817) = *pratorum* (Meigen, 1822), first recorded in Britain in 1990 from Warwickshire, is a similar case. However, it remains unclear whether *C. pygmaea* is a recent colonist influenced by recent hot summers or a more truly endemic species associated with ruderal habitats. What is clear is that post-industrial sites in the Midlands are capable of supporting extremely rare species and unusual invertebrate assemblages, and need a much higher profile in nature conservation strategies and within the schedules of designated sites drawn up variously by local authorities, wildlife trusts and the statutory agencies.

ACKNOWLEDGEMENTS

I wish to thank Nigel Wyatt of The Natural History Museum, London, for his kind assistance in identifying the material and for placing useful literature at my disposal. John Deeming provided the detailed description of the female terminalia and placed a female specimen from the National Museum of Wales at my disposal. My colleague Steven Lane provided the list of lygaeid bugs recorded from the site and assisted me with the survey.

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SHORT COMMUNICATION

Additional Records of British Reed Beetles (Coleoptera: Donaciinae).—Several new records have come to light since Menzies & Cox (1996) published their excellent guide to British Donaciinae. These include several records from Vice-counties not included on their maps.

Donacia bicolora Zschach. North Hampshire (VC12). Along River Slea from Kingsley (SU7837) to confluence with the River Wey near Sleaford (SU8138) and along the Wey to Surrey border, 1995–7. Also on North Branch of the River Wey from Holybourne (SU7440) to Surrey border at (SU8144), v. 1997.

D. cinerea Herbst. Ashton Keynes (SU036952), N. Wiltshire (VC7), 30.v.97; Somerford Keynes (SU026948), E. Gloucs. (VC33), 30.v.97 on *Typha*.

D. versicolorea (Brahm). Ravenstonedale Moor (NY6906) Westmorland (VC69) 16.viii.97 on *Potamogeton natans*. First spotted by my wife, Wendy.

D. vulgaris Zschach. Ashton Keynes (SU036952), N. Wiltshire (VC7), 30.v.97 on *Typha*. Smardale Gill (NY7206) Westmorland (VC69), recorded by Roger Key and John Bratton in 1993.

Plateumaris discolor (Panzer). Askham, River Lowther (NY5117). Westmorland (VC69) 29.vi.96.

P. sericea (L.) Smardale Gill, Westmorland (NY7206), recorded by Roger Key and John Bratton in 1993.

Sinclair (1997) mentions the first record of *Donacia impressa* Paykull from Kirkcudbrightshire (VC73). A pair taken in 1996 at Woodhall Loch (NX6766). He also includes a modern record for *D. thalassina* Germar from the same vice-county. These records do little to alter the trend of consolidation of the commoner species alongside a decline of the rarer taxa. The main exception to this being the healthy population of *D. bicolora* (our most dramatically declining species of all), along the River Wey catchment. I thank Dr Roger Key for allowing me to publish his records. — JONTY DENTON, 26 Bow Street, Alton, Hants. GU34 1NY.

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